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PHOTOGRAPHIC INTERPRETATION REPORT

MOSCOW GUIDED MISSILE ENGINE PLANT 456 KHIMKI, USSR



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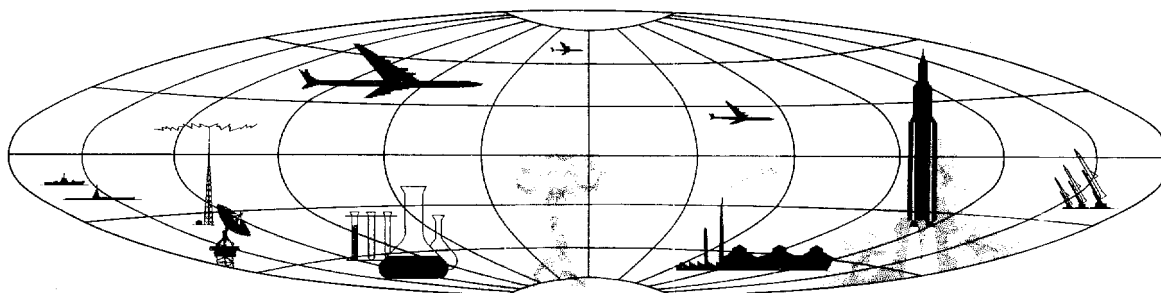
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MOSCOW GUIDED MISSILE ENGINE PLANT 456 KHMKI, USSR

SUMMARY

The Moscow Guided Missile Engine Plant 456 Khimki, USSR, consists of an assembly and fabrication (plant) area and a static test facility. The major buildings in the plant area have a total roof coverage of 1,156,000 square feet, 80 percent of which (925,000 square feet) consists of assembly and fabrication space. Sixty-four percent of the roof coverage was present in [REDACTED] before the conversion

of the plant to missile activities; most of the plant expansion since that time and almost all of the expansion since the [REDACTED] has been in assembly and fabrication space. The static test facility includes 3 possible vertical test stands, a possible checkout building, and other support facilities. The quality of available photography precludes a detailed description of the static test facility.

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INTRODUCTION

The Moscow Guided Missile Engine Plant 456 Khimki, USSR [REDACTED] is located at 55-54N 37-27E, 11 nautical miles (nm) northwest of the center of Moscow in the suburb of Khimki (Figure 1). Alternate names for the installation include Special Design Bureau and Experimental Factory for Missile Engine De-

velopment, Moskva/Khimki, 1/ and Moscow: Special Design Bureau (OKB)/Plant No 456, Khimki. Facilities of the Special Design Bureau and those of Plant 456 are reported to be mingled and/or shared. 1/

The installation contains two areas: the assembly and fabrication plant (plant area) and the

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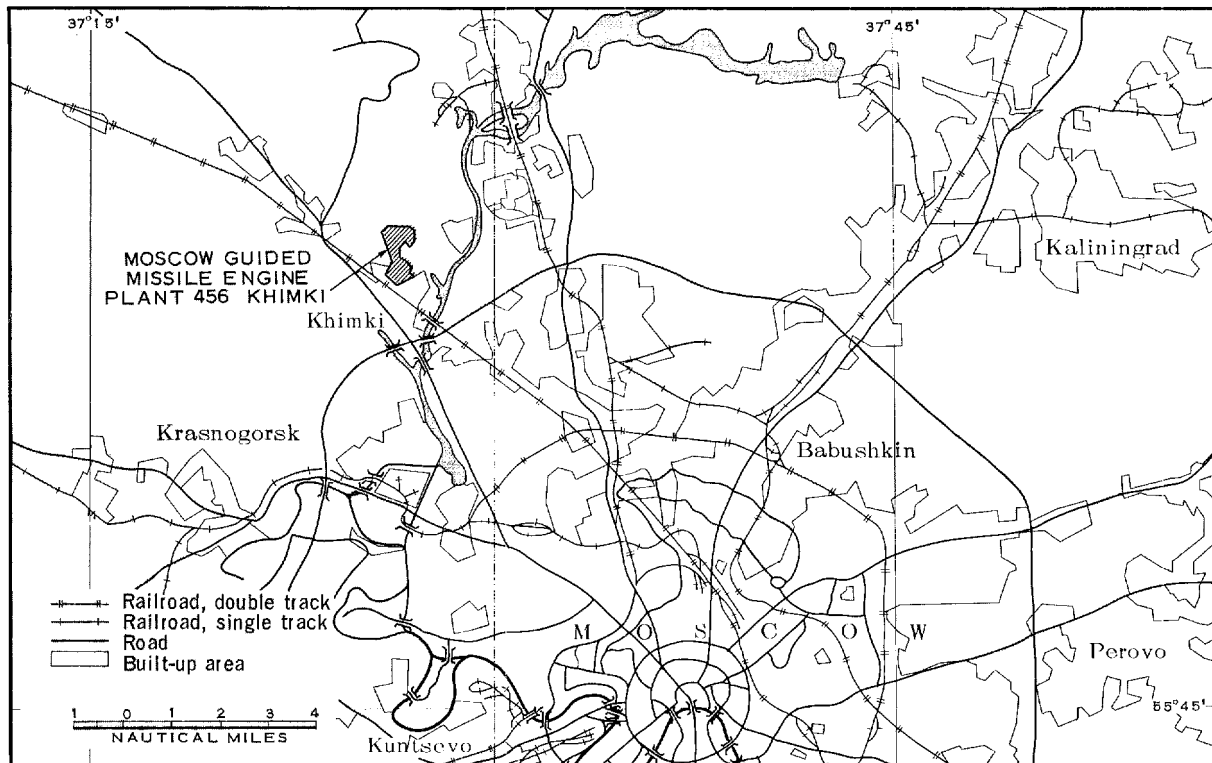


FIGURE 1. LOCATION OF MOSCOW GUIDED MISSILE ENGINE PLANT 456 KHMKI, USSR.

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static test facility. The static test facility is about 3,000 feet north of the plant area and is connected to it by a fenced corridor (Figure 2). Although this report emphasizes these two areas, a brief description is included of three adjoining areas which may be related to the installation.

The primary source used in studying Plant 456 is KEYHOLE photography. Captured [REDACTED]

[REDACTED] photography, ground photographs, and collateral sources 1/ 2/ are used as supplements in identifying functions, indicating changes since the [REDACTED] and presenting more detailed descriptions of individual components where possible. Dimensions of structures at the installation are presented in two tables, both keyed to Figure 2.

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DESCRIPTION OF FACILITIES

PLANT AREA

The assembly and fabrication plant (plant area) is located 1,000 feet northeast of the main Moscow-Leningrad rail line, on the southeast edge of the abandoned Moscow/Khimki Airfield North. The plant area measures approximately 2,500 by 2,000 feet, overall, and contains 14 major buildings and about 30 smaller structures and sheds. The major buildings have a total roof coverage of about 1,156,000 square feet; the four large assembly and fabrication buildings, all high structures with monitor roofs, represent 80 percent of the total roof coverage or 925,000 square feet. The arrangement of the monitors on the roof of the main assembly and fabrication building (item 8, Figure 2) indicates that it consists of at least five sections with a combined roof coverage of 635,000 square feet.

A possible fenced yard containing a two-story building (item 4) and several smaller structures is west of the main building near the rail spur. This area is reported to be a fuels testing area referred to as Otdel (Department) 54; 1/ a large spherical tank observed on ground photography is possibly located nearby. A separate target number [REDACTED] is assigned to the reported facility.

A long, high building (item 9) southwest of the main building is reported to be used for fuel (POL) storage. 1/ This structure has a single monitor and looks more like a shop building or warehouse than a fuel storage building; however,

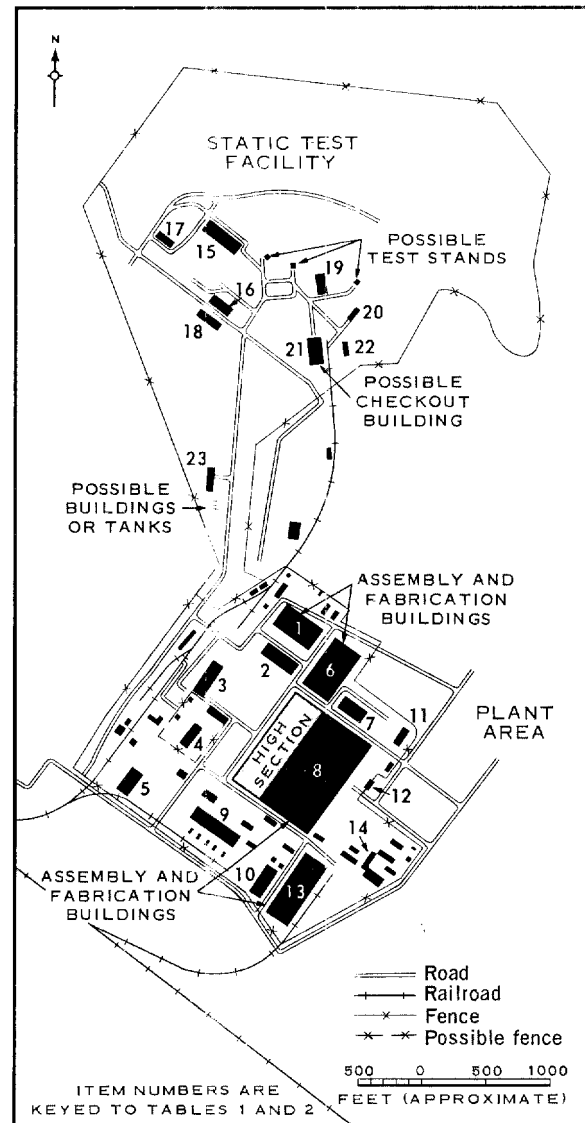


FIGURE 2. MOSCOW GUIDED MISSILE ENGINE PLANT 456
Khimki, Plant Area and Static Test Facility.

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it is flanked by four or five small upright structures which may have a fuel storage function.

Other significant facilities include 2 multi-story administration buildings, storage buildings and sheds, a motor pool, a boilerhouse, and a reported electric substation. 1/ Three rail spurs enter the plant area. The area is secured by a solid fence and guard towers.

Table 1 presents the approximate dimensions of major structures in the plant area and the date first observed or reported. The roof coverage figures do not reflect the additional space represented by multiple stories. Item numbers are keyed to Figure 2.

The plant, previously engaged in aircraft production, is reported to have been converted to missile activity in 1/ Figure 3 presents a comparison of the structures at the site at

three different times

It is significant that 736,000 square feet or almost 64 percent of the total roof coverage antedates the conversion of the plant to its current functions in missile production. The largest portion of the plant expansion was the addition of 290,000 square feet of assembly and fabrication space (items 1, 6, and 13); of these three buildings, items 1 and 13 with a combined roof coverage of 173,000 square feet appear to have been added since

STATIC TEST FACILITY

The static test facility, which was not present in 1/ is built on the south bank of a stream which empties into the Khimkinskoye Vodokhranilishche (reservoir); it is 3,000 feet north of the plant area. The test facility has been referred to as Otdel 51. 1/

Table 1. Major Buildings, Plant Area (Item numbers are keyed to Figure 2)

Item	Approximate Dimensions			Date First Observed or Reported	Description
	Length (ft)	Width (ft)	Roof Coverage (sq ft)		
1	340	x 195	66,300		Assembly & fabrication bldg; est 40 ft high; monitor roof
2	305	x 110	33,550		Administration-type bldg, multistory
3	305	x 95	28,975		Reported warehouse*
4	185	x 85	15,725		Reported fuels testing bldg,* inside possible secured yard
5	200	x 85	17,000		Possible warehouse
6	425	x 275	116,875		Assembly & fabrication bldg; est 40 ft high; monitor roof
7	240	x 60-110	20,400		Reported forge & foundry,* irregular shape
8	870	x 730	635,100		Main assembly & fabrication bldg; monitor roof; includes at least 5 sections varying in height from 20 ft to 40-50 ft
9	400	x 125	50,000		Reported POL storage;* however, high bldg with monitor along roof ridge resembles shop bldg or warehouse, flanked by 4 or 5 upright structures
10	260	x 90	23,400		Boilerhouse, expanded from 180 x 60
11	180	x 70	12,600		Reported electrical shop*
12	80	x 30	2,400		Administration-type bldg, multistory
13	535	x 200	107,000		Assembly & fabrication bldg; est 40 ft high; monitor roof
14	irregular		26,000		Motor pool and garages, 3 connected bldgs

*Function of items 3, 4, 7, 9, and 11 based on collateral source. 1/

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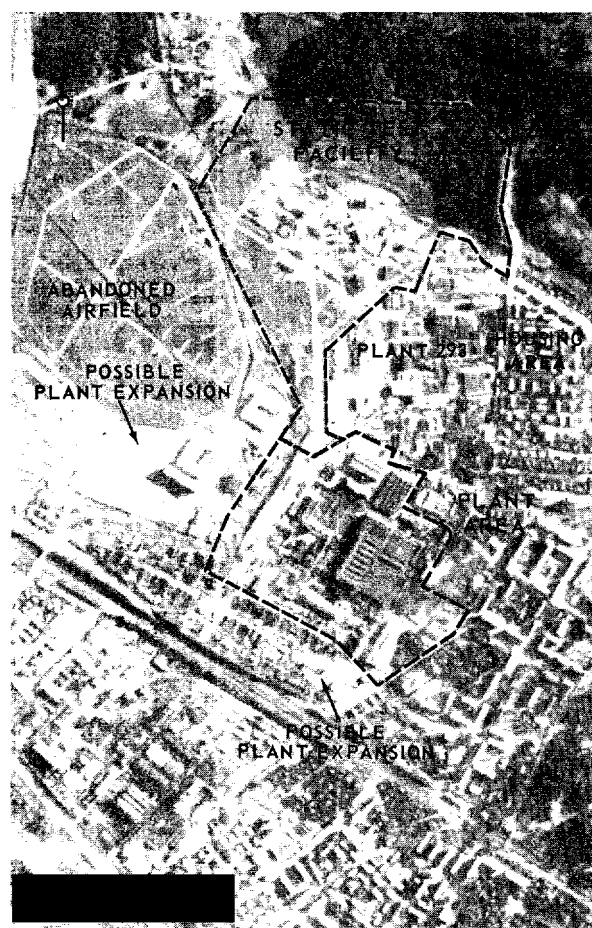
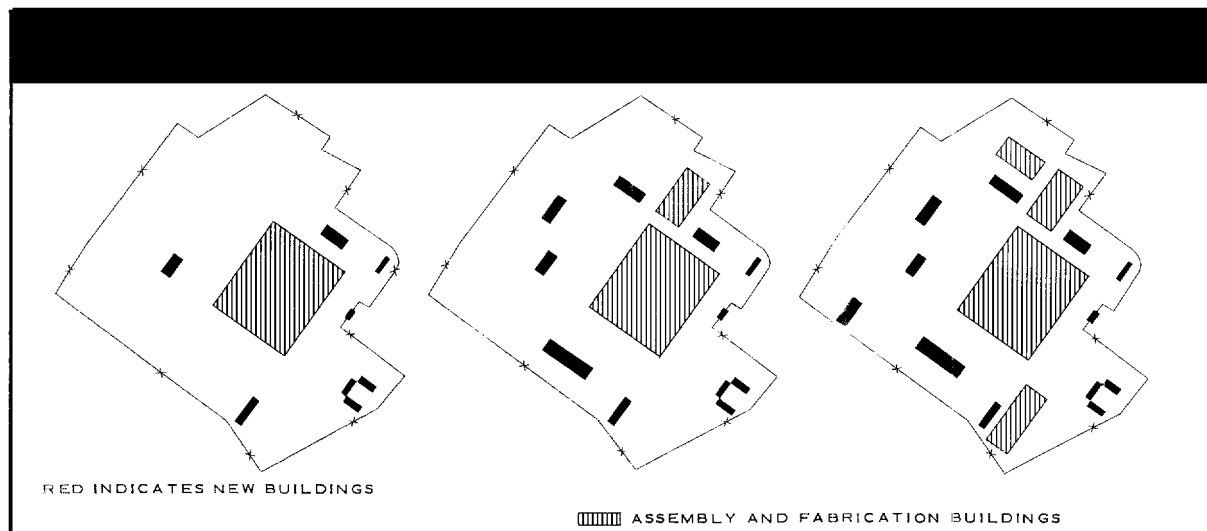


FIGURE 3. DEVELOPMENT OF MOSCOW GUIDED MISSILE ENGINE PLANT 456 KHIKMI, [REDACTED]

The perimeter fence of the test facility includes a corridor providing a direct road connection to the plant area; however, the rail spur extending to the static test facility from the plant area passes through the Moscow Aircraft Experimental Plant Khimki 293 [REDACTED] which is adjacent to both (Figure 3). The test facility consists of 3 possible vertical test stands, a possible checkout building, and at least 7 other buildings in the immediate vicinity.

The possible test stands are built on the bluffs above the stream. No detailed descriptions or measurements of these stands are feasible, but certain distances may be pertinent. The center stand is about 200 feet from the westernmost stand and 500 feet from the easternmost stand. The nearest other structures are about 150 feet away from the stands, while the possible checkout building (item 21, Figure 2) is about 500 feet from the nearest stand. The possible checkout building appears to be rail served. It is not directly aligned with any of the three stands.

A long narrow building in the connecting corridor (item 23) is set back from the access road to the plant area. Adjacent to this structure are three small objects which may be arch-roofed buildings or horizontal tanks, the latter indicating a possible fuel storage function.

Adjoining the test facility area on the north-east are woodlands and on the other sides industrial areas and open land. A pre-existing housing area is located about 1,200 feet south-east of the easternmost test stand.

Dimensions of structures observed at the static test facility can be found on Table 2, which is keyed to Figure 2; the roof coverage figures do not reflect the additional floor space represented in buildings of several stories. All items in Table 2 were present in [REDACTED] but not [REDACTED]

*Table 2. Major Buildings, Static Test Facility
(Item numbers are keyed to Figure 2)*

Item	Approximate Dimensions		
	Length (ft)	Width (ft)	Roof Coverage (sq ft)
15	360	x 110	39,600
16	195	x 80	15,600
17	170	x 75	12,750
18	195	x 80	15,600
19	170	x 85	14,450
20	120	x 45	5,400
21	205	x 120	24,600
22	130	x 60	7,800
23	185	x 60	11,100
associated possible buildings or tanks (3)			
	85	x 30	---

POSSIBLE RELATED AREAS

Three areas immediately adjacent to Moscow Guided Missile Engine Plant 456 Khimki (Figure 3) may be related to it. These areas of possible related activity or potential expansion are: the Moscow Aircraft Experimental Plant Khimki 293, a new building area on the abandoned Moscow/Khimki Airfield North, and a small area or suspect installation south of the plant area.

Plant 293 is located between the plant area and the static test facility, just east of the fenced corridor which connects the two. It contains about 10 major buildings, including 2 large assembly and fabrication buildings, a high building, and a large workshop. Most of these facilities were not present in [REDACTED] and according to ground photography appear to have been built since the [REDACTED] Plant 293 is separately secured, although the rail spur serving it enters via the plant area of Plant 456 and continues on to the static test facility.

A new building area on the southeast part of the abandoned airfield adjoins the plant area; major buildings include 2 U-shaped buildings and 2 other large, high buildings. On KEYHOLE photography the area appears to be new, and

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the appearance of the grounds and fencing suggests that further construction is planned. This building area is rail served and is within the perimeter fence of the airfield. There is no visible connection with the plant area or the static test facility.

The third possible related area is south of the plant area, along the main rail line and adjoining one of the rail spurs entering the plant area. This third area consists of at least four substantial buildings in a previously residential section.

REFERENCES

PHOTOGRAPHY

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MAPS OR CHARTS

- ACIC. US Air Force Target Mosaic, Series 10, [REDACTED] 1st ed, Oct 51, scale 1:10,000 (SECRET)
ACIC. US Air Force Mosaic, Series 25, Sheet [REDACTED] 4th ed, Oct 60, scale 1:25,000 (SECRET)
ACIC. US Air Target Mosaic, Series 50, Sheet 0167-5/2ZMA, 2d ed, Mar 59, scale 1:50,000 (SECRET)

DOCUMENTS

1. CIA. SI 81-59, Special Design Bureau and Experimental Factory for Missile Engine Development, Moskva/Khimki, 2 Oct 59 (SECRET)

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REQUIREMENT

CIA. C-RR3-80,461

NPIC PROJECT

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